

## ON THE GENUS PTILOPHORA AND PTILOPHOROIDES (Notodontidae)

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*Ptilophora plumigera* is rather a somewhat peculiar Notodontidae, the adult of which appears from late autumn to early winter. Its structure is also unique, the genus which it belongs to being considered to be isolated from the other genera of the family.

*P. plumigera* is said to have a wide range, being distributed from the Central Europe to Japan. In Japan, the so-called *plumigera* is one of the very common moths, and since being recorded by PRYER (1884) and LEECH (1889) there are many illustrations and some locality-lists of moths that involve it.

Dr. MATSUMURA (1920), however, considers the Japanese "*plumigera*" a distinct species, named *nohirae* MATSUMURA, representing a new genus *Ptilophoroides*; he describes them in Japanese together with a new species *jezoensis* MATSUMURA (generotype of *Ptilophoroides*) from Hokkaido.

Thus, if we follow Dr. MATSUMURA's opinion, we have to admit that in Japan there are two species of *Ptilophoroides*: *nohirae* and *jezonensis*. Still, many Japanese lepidopterists, such as Dr. MARUMO (1932), do not recognize *nohirae*, but consider *Ptilophora plumigera* distributed in Japan.

Unfortunately, because of the linguistic barrier, Dr. MATSUMURA's important paper (1920) has been overlooked by western authors concerned with the Japanese Notodontids, and the new genus and species described by him are not cited even in the supplementary work of SEITZ, *Macrolep.*, vol. 2 (1933). Moreover, nobody seems to have made a detailed comparison of the Japanese and European *plumigera*. Not even Dr. MATSUMURA himself in his original description of *nohirae* mentions anything about the exact differences between them.

According to my observation of both external and anatomical structures of the species concerned, the Japanese specimens of so-called "*plumigera*" are specifically distinct from the European, and therefore the distinct name, *nohirae*, should be applied to them. In *P. nohirae* both wings are a little darker than in *plumigera*, the forewing showing more distinct yellowish discocellular spot, the fringe is unspotted; the hindwing is more transparent, and the transverse dark band is better developed, passing outside of the discocellulars. The male genitalia of both species show so many remarkable distinctions in the structure of uncus, valva, juxta, etc. The aedoeagus of *plumigera* is strongly forked, but it is narrow and slender in *nohirae*. The eighth sternite of *nohirae* has a strongly sclerotized, bilobed protuberance, while that of *plumigera* is weakly convex.

Dr. MATSUMURA (1921) cites his original description of *Ptilophoroides* in English as follows:

- "(1) ♂. Antennae long plumose, each tooth with some long hairs, all the last 9 joints reaching to the apex, so that they are level at the apex; in female filiform, very finely ciliated.
- "(2) Palpi hidden by the facial hairs, the 3rd joint being naked and somewhat enlarged at the apex, the 2nd and 3rd joints with long hairs.
- "(3) Primaries wants vein 9, 6 given off from 7.
- "(4) Anterior tibia wants leaf-like appendage."

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In my observation, the first characteristic is rather common to *plumigera*, *nohirae* and *jezoensis*, and it will hardly be considered peculiar to *Ptilophoroides*. The same is true of the second, since the labial palpus of the three species are concealed in long hair. The third characteristic is subject to individual variation: in *plumigera* veins 8 and 9 are separated, but in *nohirae* both coincided and separated occur, and in *jezoensis* 8 and 9 are coincident. The specimens I have observed are small (2 ♂♂ & 2 ♀♀ of *plumigera*, 12 ♂♂ & 1 ♀ of *nohirae*<sup>2)</sup> and 7 ♂♂ & 5 ♀♀ of *jezoensis*<sup>3)</sup>), and after further observation there will presumably be individuals whose venations show either characteristic in all the three species. The last, or fourth, characteristic is apparently based on an error of observation, since *nohirae* and *jezoensis* both have a well developed epiphysis as does *plumigera*.

The male genitalia of all three species show such remarkable modification one from another that it is difficult to divide them into two genera. Therefore, it will be reasonable to sink *Ptilophoroides* into *Ptilophora*, considering *jezoensis* congeneric with the other two.

*P. jezoensis* seems to be rather common in Hokkaido where it wings in October. Recently it was also recorded from Northern Honshu (Morioka, Iwate Pref.) by Mr. OKANO (1951). *Ptilophora sutchana* described by O. BANG-HAAS (1927), but referred to erroneously as *sutschana* by GAEDE, is apparently synonymous with *jezoensis*.

In conclusion, the synonymy and distribution of the three species is as follows:

*Ptilophora* STEPHENS, 1828 = *Ptilophoroides* MATSUMURA, 1920 -syn. nov.-

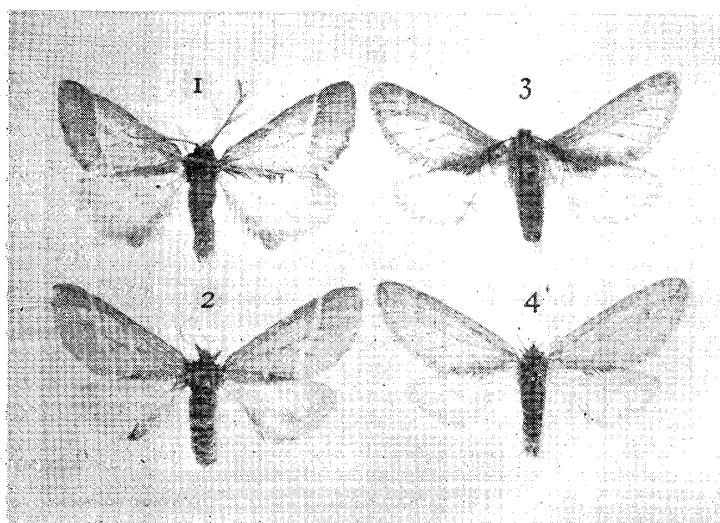


Fig. 1. *Ptilophora nohirae* Matsumura, ♂.  
Fig. 2. ditto, ♀  
Fig. 3. *Ptilophora jezoensis* Matsumura, ♂.  
Fig. 4. ditto, ♀

*plumigera* ESPER, 1758

Europe, Southern Scandinavia,  
Northern Italy, Bulgaria,  
South-East Russia.

*nohirae* MATSUMURA, 1920 クシヒゲシヤ  
チホコ

= *plumigera* (nec Esper), PRYER, 1884;  
LEECH, 1889; MATSUMURA, 1905;  
MARUMO, 1920, 1932; et auct.  
Hokkaido, Honshu, Kyushu.

*jezoensis* MATSUMURA, 1920 エゾクシヒゲ  
シヤチホコ

= *sutchana* O. BANG-HAAS, 1929

-syn. nov.-

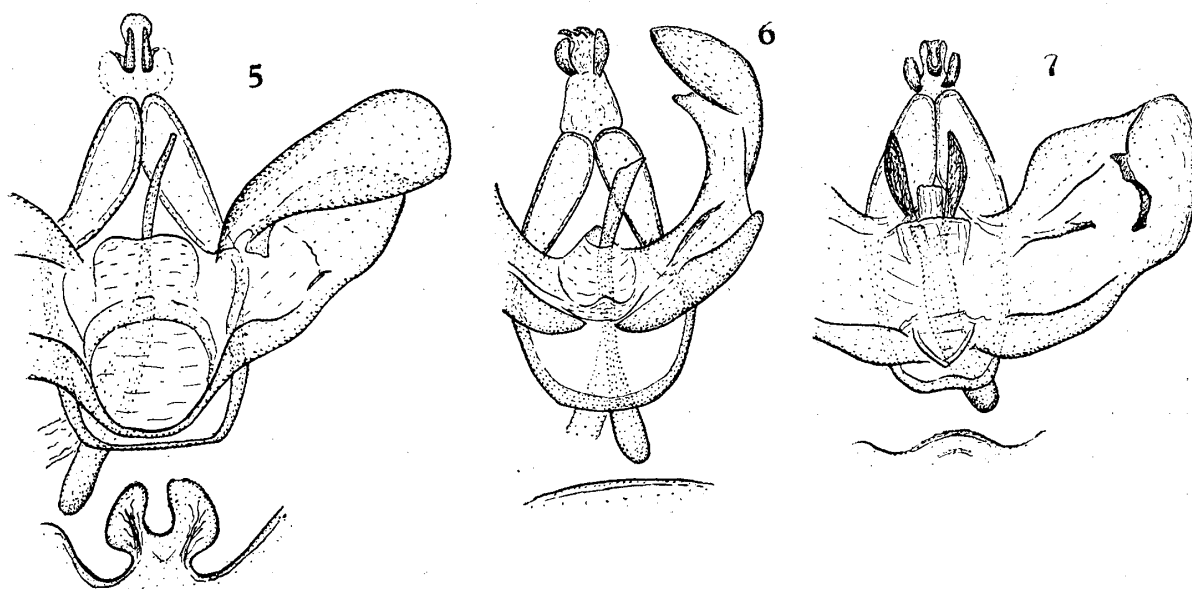
= *sutschana* (err. typogr.) GAEDE, 1933  
Hokkaido, Northern Honshu, South-  
ern Ussuri.

2) Takao-san, Tokyo Pref., 22 Dec. 1940, 1 ♂, 1 ♀; 16 Dec. 1948, 5 ♂♂ (H. INOUE). Takao-san, 25 Dec. 1952, 6 ♂♂ (K. ISHIZUKA).

3) Okushibetsu, Teshio (Hokkaido), 11-17 Oct. 1947, 3 ♂♂, 3 ♀♀ (T. HASEGAWA). Futatsuyama, Kushiro, 17-21 Oct. 1952, 4 ♂♂, 2 ♀♀ (K. IJIMA).

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Male genitalia :

Fig. 5. *Ptilophora nohirae* MATSUMURA6. *P. jezoensis* MATSUMURA7. *P. plumigera* ESPER